

Appendix E.

Sustainable Arlington's Action Plan

Town of Arlington, Massachusetts

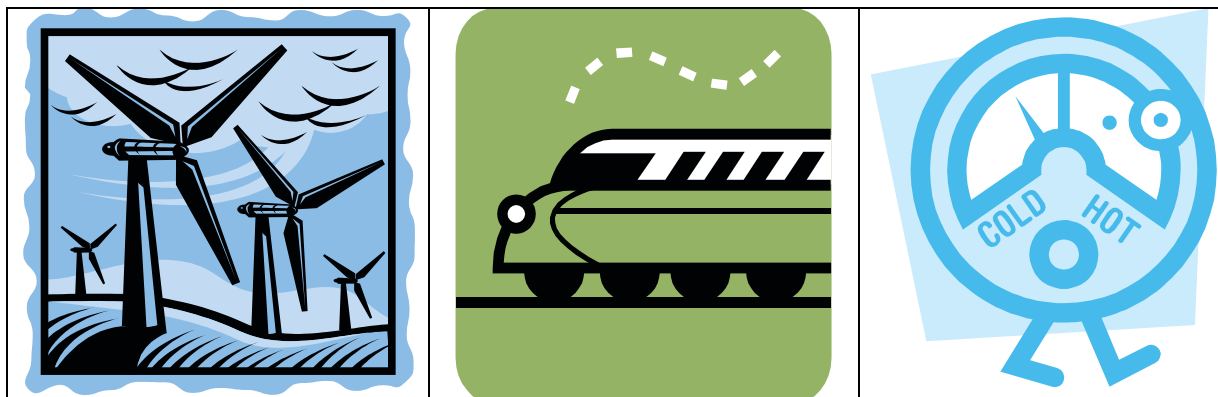


Arlington Sustainability Action Plan

Volume 1: Climate Action Plan

How the Arlington Community can do its part to improve air quality and the global climate by reducing CO₂ emissions

June 2006



Arlington Sustainability Action Plan

April 2006

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Executive Summary



Six Percent by 2010, Twelve Percent by 2015

Recognizing that its own greenhouse gas emissions had a negative impact on the global environment, Arlington became a part of the Cities for Climate Protection Campaign (CCP) in May 2000. By joining this campaign, the Board of Selectmen declared Arlington's commitment to reduce its contribution to climate change and to develop a climate action plan. As part of Arlington's Sustainable Action Plan, Sustainable Arlington proposes that the commitment the Town makes is to reduce its carbon dioxide emissions to six percent below 1997 levels by 2010 and to twelve percent below 1997 levels by 2015 in order to help realize the vision of a more healthy and vibrant future.¹ This document outlines pertinent information regarding necessary steps for the implementation of these realistic goals.

These may appear to be relatively modest percentage goals, but in the context of a society whose energy usage and therefore emissions have been growing annually, they will require strenuous efforts to attain. They should also be viewed in relation to the goal in the Massachusetts State Climate Protection Plan of reducing emissions to 10% below 1990 levels by 2020. In addition, the reductions planned here are for the most part ones that can be taken within the Town by its residents, businesses, and municipal government (except for transportation, which includes some policy decisions made at higher governmental levels). Since the state and federal governments, and other actors, are also making decisions that will reduce global warming pollution, actual emissions by energy consumers in Arlington could be reduced by greater amounts.

ENERGY EFFICIENCY (Buildings)

Background

Arlington has ample opportunities to become more energy efficient that will save money while at the same time benefiting the environment. The residential, municipal, and commercial sectors all can utilize modern, efficient technologies and practices that reduce significantly the amount of energy needed to provide necessary services. By minimizing our energy use and environmental impact through efficiency, innovation and creativity, we can create a more vibrant and healthy community. Utilizing thoughtful planning tools and forward-thinking public policy, the triple bottom line for creating sustainable communities can be achieved—a sound economy, a healthy environment, and social equity. And as described below, the Town is already reaping the rewards from a handful of successful energy efficiency projects.

Energy needs in Arlington's buildings are met primarily with fossil fuels that contribute to poor air quality and climate change. A 1997 Greenhouse Gas Emission Survey found that the town of Arlington produced a total of 467,000 tons of carbon dioxide.² In order to meet the goal of reducing emissions 6 percent below 1997 levels by 2010, and 12% reductions by 2015, it is necessary for Arlington to promote significant energy efficiency measures. Common examples include changing out old inefficient appliances and heating systems, using

¹ The year 1997 is used here because the baseline inventory of emissions against which we are comparing was done for 1997.

² This value is different from what was contained in the original inventory. Specifically, Sustainable Arlington revised the estimate of transportation-related emissions to better reflect the emissions of town residents rather than of vehicles traveling through the town.

efficient lighting and increasing insulation.

When the Board of Selectmen chose to join the Cities for Climate Protection Campaign, they committed to reducing emissions. Aggressive use of energy efficiency can greatly reduce emission levels, *while saving the Town, residents, and businesses money*, especially in the current high-energy price environment.

Existing Measures

Arlington already saves an estimated \$130,000 per year in energy costs due to the streetlight and traffic signal efficiency retrofits completed in July 2004. Each year, these two projects alone reduce electricity use by an estimated 1,220,000 kilowatt hours (kWh) while avoiding the release of 875 tons of carbon dioxide. This is enough electricity to meet the annual needs of 137 households in Arlington. In addition, approximately \$9,175 is saved annually due to the 2003 Robbins Library efficiency retrofits. These projects have also been highly cost effective, achieving rapid paybacks, due in part to the application of utility rebates. As energy costs rise, so will the ongoing savings.

In addition to these “one time” projects, the Town has other standing commitments and programs in place. At Town Meeting in May 2003, Arlington passed Sustainable Arlington's proposal that established the goal of LEED (Leadership in Energy and Environmental Design) Silver certification for new and substantial renovations of town-owned buildings. Further, programs to increase efficiency already exist for the Arlington community, such as the Arlington Home Rehabilitation Program and the Menotomy Weatherization Service.

Key Recommendations

- Establish an Energy Management Work Group, modeled after the existing inter-departmental group in Cambridge, MA, whose goal is to conduct an emissions inventory, evaluate the energy performance of city-owned facilities, and identify and implement energy efficiency measures. The Board of Selectmen will establish this group.
- Create an information clearinghouse on current rebates and opportunities available to the Arlington community to increase participation in energy efficiency programs. This would include a regularly updated, and heavily marketed website, SustainableArlington.org, as described in detail in Chapter 5.
- Have all municipal buildings and energy consuming activities undergo a comprehensive energy efficiency audit and consider using an energy services company to implement a package of energy efficiency measures under an energy savings performance contract (ESPC).

ENERGY SOURCING

Background

The Arlington community has a great opportunity to reduce its greenhouse gas emissions at the source by utilizing renewable energy sources. ‘Clean power’ or ‘clean electricity’ is generated through the use of renewable sources and not from the burning of fossil fuels. Therefore, it does not produce greenhouse gases and releases less smog-forming (NO_x), acid rain-forming (SO₂) pollutants, carbon dioxide (CO₂) and particulate emissions. The Town can utilize renewable energy either by installing renewable energy applications or by purchasing clean power.

Presently, residential and commercial structures are the major contributors to the town’s CO₂ emissions in terms of energy sourcing. Hence, the Town should give priority to the proposed ‘residential and commercial’ measures, especially clean power purchasing. Currently, clean power purchasing through renewable energy certificates seems to be the most cost effective method for reducing the CO₂ emissions that result from electricity consumption in Arlington.

Existing Measures

Arlington's Board of Selectmen approved the installation of a meteorological tower within the town in order to gather data on wind speed and availability, during its meeting on February 28th, 2005. The data will be used to assess the feasibility of installing a wind turbine to generate clean power for domestic use and sale in the market.

At this time, the Town of Arlington is not purchasing clean power. The Town currently has a contract with Trans Canada Power to supply electricity to the municipal buildings. As of April 14, 2005, there are 14 households in Arlington that participate in the clean energy choice program to purchase clean power through the Massachusetts Energy Consumers Alliance.

Key Recommendations

- The Town should periodically investigate the opportunities for purchasing clean power from clean power marketers.
- The Town should continue to search for possible sites and funding opportunities to install a wind turbine in Arlington.
- The Town should make use of the available grants for the installation of PV systems on municipal buildings.
- The Town should undertake educational and promotional initiatives to encourage Arlington residents to purchase clean power and/or install clean power sources in order to offset the CO₂ emissions of their electricity consumption.

TRANSPORTATION

Background

Americans have become increasingly dependent on their vehicles for almost every trip that they make. In the past couple of years, the size of the vehicles on the road has increased and their efficiency has decreased. Even in Arlington, there is heavy dependence on single-occupancy vehicles among those residents who commute to work.

Transportation is a major contributor to the amount of carbon dioxide emissions that are released in Arlington each year. The Town of Arlington annually emits an estimated 161,000 tons of carbon dioxide from transportation. In order to meet the goal of reducing emissions 10 percent below 1997 levels by 2010, it is necessary for Arlington to promote the use of alternate forms of transportation and to encourage residents to walk, bicycle, and carpool. By implementing the proposals outlined in this document, it is possible to reduce the emissions resulting from transportation by 19,000 tons per year. This would be a significant step towards meeting the goal passed by the Board of Selectmen when they chose to join the Cities for Climate Protection Campaign. If these programs were rigorously followed, this plan allows for an even greater amount of carbon dioxide reduction.

Existing Measures

Present measures to reduce the amount of carbon dioxide emitted include the procurement policy of fuel-efficient town vehicles, crosswalk improvement, and programs generated by "Walking in Arlington" and "Safe Routes to School". The procurement policy of fuel-efficient town vehicles began as a result of Warrant Article 22, which requires Arlington to purchase motor vehicles that are the most fuel-efficient, reliable and practical model available to fulfill the intended municipal use. Carbon dioxide emissions are being reduced as each increasingly fuel-efficient vehicle substitutes for an older, less efficient model. Crosswalk improvements and the previously mentioned walking programs improve pedestrian safety. With improved pedestrian safety in

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Arlington, residents are able to use alternate forms of transportation and reduce their carbon dioxide contribution.

Key Recommendations

For a summary of the transportation recommendations, please refer to the table at the end of the Executive Summary. The full explanation of all the existing and proposed transportation measures can be found in Chapter 4.

- The Town should "lead by example" in its own vehicle use, by fully implementing the fuel-efficient vehicles by-law, using a bio-diesel blend in DPW trucks and instituting a trip-reduction program for municipal employees.
- Arlington should encourage its residents to buy the most energy efficient vehicles that will meet their household needs. There is a substantial variation in the miles per gallon between models in the same vehicle class and between classes. Even a slight shift in buying patterns could save 336 tons of carbon dioxide per year.
- Arlington should improve the desirability of non-auto transportation alternatives, through such means as improving safety for pedestrians and bicyclists, giving incentives for using public transit, and facilitating ride-sharing.
- The Town should actively lobby for state and federal policies to improve automobile miles per gallon and to reduce vehicle miles traveled, such as auto sales tax rates tied to CO2 emissions, auto insurance rates based on miles traveled, and improved federal fuel efficiency standards.

COMMUNITY BASED SOCIAL MARKETING

The successful implementation of Arlington's Sustainability Action Plan (ASAP) is dependent upon support from the community. Community Based Social Marketing (CBSM) efforts will encourage residents, businesses, and municipal departments to reduce their greenhouse gas emissions (GHG) through a combination of energy efficiency, renewable energy, and transportation programs.

CBSM is built upon the belief that education and outreach are essential components of influencing sustainable behavior. For example, the use of compact fluorescent light bulbs (CFL's) can be encouraged when the benefits are conveyed, including energy cost savings, greenhouse gas emissions reduction, and the fact that some bulbs last up to seven years, reducing the number of times that it is necessary to replace bulbs. A CBSM campaign that encourages CFL usage may include educational information along with a free sample bulb for residents to use in their homes. By educating consumers on the benefits and encouraging the behavior by providing a sample, CBSM has been proven to achieve results.

Recommendations

The goal for Arlington's overall carbon dioxide emissions reduction plan is six percent from the 1997 level of 467,000 tons to the level of 439,000 tons by 2010, and by twelve percent to the level of 411,000 tons by 2015. This reduction will improve air quality and environmental health while reducing energy costs for residents, businesses, and town departments. Several recommended CBSM campaigns have been created to target these three sectors of Arlington's community, encouraging them to implement the changes necessary to reduce carbon dioxide emissions.

The development of the SustainableArlington.org website will be instrumental in communicating opportunities for involvement in Arlington's sustainability initiative. The website will include information specific to Arlington's three target communities, including information for residents on low-interest loans available for energy efficient household remodeling, opportunities for businesses to purchase renewable energy credits, and information for alternative transportation.

The Arlington Alliance of Sustainable Businesses (AASB) is a CBSM recommendation designed to encourage participation in the ASAP by the business community. The central idea of the AASB is the development of a network of Arlington businesses that have implemented GHG reduction practices into their business plan. Participating businesses could be recognized through the Arlington Advocate newspaper, window placards if they have a storefront, and through the SustainableArlington.org website.

An educational recommendation of CBSM includes a series of workshops for town employees, residents, and businesses, informing them of opportunities to adopt energy efficient practices, invest in renewable energy sources, and utilize alternative forms of transportation. Workshops, targeted to specific sectors of Arlington's community, will be designed to facilitate the implementation of the ASAP by identifying and acknowledging barriers to sustainability and using collective knowledge to create innovative solutions to overcome barriers.

ROAD MAP TO 2010 AND 2015

Volume one of the ASAP is designed to help Arlington reduce its contribution to climate change, improve air quality and health, and reduce energy usage and costs within the Arlington community. The potential benefits are long-lasting as the Arlington community works together to address climate change, improve environmental conditions, save money, and build a healthy and strong community.

Emissions Reductions

The following "Road Map to six percent by 2010 and twelve percent by 2015" describes the CO₂ reductions necessary for Arlington to begin to reach its goals set forth in this sustainability action plan.

Table 1. Reduce Emissions by 6% and 12% (tons of carbon dioxide)

	2010	2015
Overall emissions		
1997 level	466,648	466,648
planned reduction	27,999	55,998
future level	438,649	410,650
Municipal		
1997 level	19,003	19,003
planned reduction	1,140	2,280
future level	17,863	16,723
Commercial Buildings		
1997 level	72,888	72,888
planned reduction	4,373	8,747
future level	68,515	64,141
Residential Buildings		
1997 level	213,575	213,575
planned reduction	12,815	25,629
future level	200,761	187,946
Transportation		
1997 level	161,182	161,182
planned reduction	9,671	19,342
future level	151,511	141,840

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Table 2. Emission reduction measures in the action plan

Overall Savings by sector (details below and in following tables)			
Sector	Annual CO₂ Reduction by 2010 (tons/yr)	Annual CO₂ Reduction by 2015 (tons/yr)	% total savings 2015
Electric efficiency	6,767	11,627	20%
Natural gas/fuel oil efficiency	11,118	22,237	39%
Energy sourcing (purchases of renewable/clean electricity)	1,848	5,733	10%
Transportation	9,070	17,958	31%
Total	28,584	57,396	100%
% of 1997 emissions (466,648 tons)	6.2%	12.3%	

Key Measures	Status	Annual CO₂ Reduction by 2010 (tons/yr)	Annual CO₂ Reduction by 2015 (tons/yr)
Electric Efficiency			
Municipal Measures			
Streetlight Retrofits	Completed	904	904
Traffic Signal Retrofits	Completed	21	21
Pedestrian Crossing Retrofits	In progress	40	101
Participate in green construction	Proposed	141	259
Purchase of Energy Star products	Proposed	51	85
Participate in audit program	Proposed	95	175
Efficient lighting retrofits (non streetlight)	Proposed	229	420
Residential Measures			
Enforce existing building codes	Proposed	4	7
Enhance existing building codes	Proposed	5	9
Participate in Energy Star Homes	Proposed	7	13
Participate in utility home audit program	Proposed	2,060	3,776
Adopt weatherization measures (electric heat homes only)	Proposed	69	126
Adopt efficient lighting measures	Proposed	1,128	2,067
Adopt efficient appliance measures	Proposed	687	1,259
Commercial Measures (including enforcement of building codes)			
Participate in utility new construction program	Proposed	141	259
Participate in utility C&I audit program	Proposed	1,226	2,247
Electric Efficiency Total		6,767	11,627
Natural Gas and Fuel Oil Efficiency (see Table 5 for further details)			
Municipal - all measures	Exist./Prop.	342	683
Residential Measures	Exist./Prop.		
attic, wall insulation	Exist./Prop.	3,216	6,432
boiler/furnace replacements	Exist./Prop.	2,053	4,105
weatherization, air sealing	Exist./Prop.	3,011	6,021

Key Measures	Status	Annual CO ₂ Reduction by 2010 (tons/yr)	Annual CO ₂ Reduction by 2015 (tons/yr)
set-back thermostats	Exist./Prop.	958	1,916
Commercial/Industrial	Exist./Prop.		
attic, wall insulation	Exist./Prop.	536	1,072
boiler/furnace replacements	Exist./Prop.	342	684
weatherization, air sealing	Exist./Prop.	502	1,003
set-back thermostats	Exist./Prop.	160	319
Natural gas/fuel oil Total		11,118	22,237
Efficiency Total (electric, natural gas, fuel oil)		17,666	33,705
Energy Sourcing (renewable energy)			
Municipal Measures			
Installation of a 200kW Wind Turbine in Arlington.	Proposed	0	186
Installation of PV Systems on Municipal Buildings	Proposed	3	12
Town Demonstration House	Proposed	0	2
Purchase of Clean Electricity (Municipal)	Proposed	100	306
Become a "Solar Boston" Partner	Proposed		N/A
Residential and Commercial Measures			
Installation of PV Systems in Residential and Commercial Buildings	Proposed	100	293
Residential Use of Solar Hot Water Heating	Proposed	15	41
Purchase of Clean Electricity (Community)	Proposed	1,630	4,893
Business Challenge Program	Proposed	N/A	N/A
Sustainable Arlington Website	Proposed	N/A	N/A
Energy Sourcing Total		1,848	5,730

Key Measures	Status	Annual CO ₂ Reduction by 2010 (tons/yr)	Annual CO ₂ Reduction by 2015 (tons/yr)
Transportation			
Municipal Measures			
Fuel-Efficient Procurement Policy for Town Vehicles	Existing	23.7	35.4
Municipal No-Idling Policy	Proposed	27.4	27.4
Trip-Reduction Programs for Municipal Employees	Proposed	64.3	64.3
Police Units On Bicycle	Proposed	7.3	7.3
Converting DPW Fleet to Biodiesel	Proposed	95.4	95.4
State and Federal Funding	Proposed	N/A	N/A
Clean Cities Program	Proposed	N/A	N/A
Residential and Commercial Measures			
Crosswalk Improvement	Existing	16.5	16.5
Walking in Arlington	Existing	16.5	16.5
Safe Routes to School	Existing	0.4	0.4
Federal Tax Incentive for Clean Fuel and Electric Vehicles	Proposed	N/A	N/A

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Key Measures	Status	Annual CO ₂ Reduction by 2010 (tons/yr)	Annual CO ₂ Reduction by 2015 (tons/yr)
Infrastructure Improvements for Bicycles	Proposed	16.7	16.7
Traffic Calming and Improvements in Pedestrian Safety	Proposed	163.1	163.1
Enforcement of Traffic Laws	Proposed	114.3	114.3
School-Wide No-Idling Policy	Proposed	95.9	95.9
Encourage Non-Motorized Transport to School	Proposed	67.5	67.5
Need for More Crossing Guards	Proposed	16.4	16.4
Trip-Reduction Programs	Proposed	106.1	106.1
Ride Share Program	Proposed	78.3	78.3
Transportation Options Center	Proposed	11.3	11.3
Commuter Challenge	Proposed	112.6	112.6
Use of Car Sharing	Proposed	78.3	78.3
Campaign Challenge to Reduce Emissions	Proposed	114.3	114.3
Fuel Efficient Car Choice Campaign	Proposed	168.1	336.1
Subtotal – policy measures in Arlington		1,406	1,831
Support State Government Policies to Improve Fuel Efficiency and Reduce Vehicle Miles Traveled	Proposed	6638.9	13,277.8
Lobbying for Federal Corporate Average Fuel Economy Standards	Proposed	1025	3,106.0
Subtotal – state and federal policy measures		7,664	16,384
Transportation Total		9,058	17,958

Time Line

The following is a suggested time line for meeting the goals stated in the action plan. The table recommends a time frame for meeting each item, as well as identifying which entity in the town will take responsibility for the item. Note that once the position of a Sustainability Program Manager is established, he or she will take responsibility for many of these projects and programs.

Table 3. A time line for implementing the action plan

Key

Near: immediately to 18 months

Mid: 18 months to 3 years

Long: beyond 3 years

Timeline for Implementing ASAP			
What	Time frame	Who	How
Energy Efficiency			
Establish Energy Management Work Group	Near	Board of Selectmen	Identify key players in town gov't
Energy Audit of all municipal buildings/consumption	Near	Town Manager	Outside firm
Establish principle that town will invest in all efficiency measures	Near	Board of Selectmen	Part of ASAP ratification
Inserts in property tax, water/sewer bills	Mid	Town Manager	
Enforce 2003 Arlington Green Building Bylaw	Near	PTBC, ARB	
Create information clearinghouse on rebates (including website)	Near to Mid	Sust. Arlington/BoS	Part of community marketing
Adopt more efficient construction regulations	Mid	Planning department	This will take some coordination between planning, BoS and Sustainable. Writing by-laws is complex process as you want to avoid unintended consequences
Hold information sessions for Builders	Near, Mid	Board of Selectmen/ Chamber of Commerce	
Establish Sustainability Program Manager	Long	Board of Selectmen	Identify cost savings that can fund position
Monitor electric and heating bills from each dept	Near	Town Manager	
Develop necessary accounting process to track savings	Near	Town Manager	
Conduct training in energy efficiency for municipal employees	Mid	Town Manager	
Organize and apply for all utility programs, rebates, grants	Near	Sust. Arlington/BoS	
Provide education opportunities on efficiency benefits for residents	Mid/Long	Sust. Arlington/BoS	Part of community marketing
Establish Residential Recognition Program	Near to Mid	Board of Selectmen	
Establish Efficiency Home Improvement Loan program	Mid	Planning department	This may already exists on some form or simply be an addition to a program
Establish a Commercial Energy Efficiency Program	Mid	BoS/Chamber of Commerce	Meet with board of chamber and request involvement
Create Arlington Alliance of Sustainable Business	Near	BoS/Chamber of Commerce	Meet with board of chamber and request involvement
Encourage EcoStar program	Near		Need to know more about this.
Establish Commercial Recognition Program	Near to	Chamber of	Need to know more about this.

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	Mid	Commerece	
Offer tax and other incentives for green buildings	Mid to Long	Board of Selectmen	
Energy Sourcing			
Town investigates opportunities to purchase clean power	Near	Board of Selectmen	Urge Town Manager, begin review to prepare for next contract
Purchase Clean Electricity	Mid	Board of Selectmen	Can be achieved in next contract if the savings are there.
Town searches for sites/funding for wind turbine	Near	Sustainable Arlington	Wind Group currently proposing turbine for Brackett School
Town makes use of available grants for PV systems	Near	Sustainable Arlington	Identify grants as part of ASAP process
Encourage Arlington residents to purchase clean power	Mid	Sust. Arling/BoS	Part of community marketing
Install PV systems on Municipal buildings	Mid	Town Manager	Town manager needs to do a cost benefit analysis
Town Demonstration House	Long	Public/private partnership	Board of selectmen can look for a partner
Become a Solar Boston partner			This program has been defunded
Encourage PV systems in residential and commercial buildings	Mid	Sust. Arling/BoS	Part of community marketing
Encourage Res. Use of Solar Hot water heating	Mid	Sust. Arling/BoS	Part of community marketing
Transportation			
Town uses bio-diesel blend in DPW trucks	Near	Board of Selectmen	Greengrease Monkeys to assess fleet (?)
Town encourages res. to buy energy efficient vehicles	Mid	Sust. Arling/BoS	part of community marketing
Improve non-auto transportation (safety for pedestrians/cyclists, etc)	Mid	BoS, Planning commission	Mass Ave corridor earmark
Encourage non-auto (motorized) transit (to schools, etc)	Near to Mid	Sust.Arling/Bos	part of community marketing
Establish no-idling enforcement policy	Near	Town Manager	Already in progress
Offer pretax transit passes to municipal employees	mid	Town Manager	Need to do an analysis of the cost. Might be a contract issue
Charge market rates for daily parking on public property	Near	Board of Selectmen	
Educate town employees on green transit options	Near	Town Manager	
Promote flex hour policies, allow telecommuting	Mid	Town Manager	
Expand participation of town depts in vehicle sharing	mid	Town Manager	
Promote carpooling for town employeesa and residents on website	mid	TM/SA/BOS	Need a good logistical plan
Publicize to Arl res. Availability of tax credits for clean fuel/electric cars	Near to Mid	SA/Bos	Part of community marketing
Implement Police on bicycles	Near to Mid	Town Manager	This has been done in the past, but was affected by budget cuts

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Funding Sources

The following table outlines the grants and rebates offered by the Massachusetts Technology Collaborative as of August 2006. For more details see <http://www.masstech.org>.

Table 4. MTC Initiatives (as of August 2006)

Small Renewables Initiative	residential, commercial, industrial, institutional, city/town	solar photovoltaic (PV), wind electric, micro-hydroelectric 10kW or smaller capacity	rebate up to \$50,000
Clean Energy Choice	any state resident, business, city government, school or other group	wind electric, solar PV, landfill gas, biomass	MTC provides matching grants of up to 100% for each dollar consumers spend on clean energy. (see www.cleanenergychoice.org)
Green Schools Initiative	Massachusetts school districts	wind electric, solar PV	Grants for renewable energy installations
Large Onsite Renewables Initiative	commercial, industrial, institutional, city/town capacity larger than 10kW	solar PV, wind electric, hydroelectric, fuel cells, landfill gas, biomass	Design grants - capped at the lesser of \$75,000 or 75% of actual cost Construction grants - capped at the lesser of \$500,000 or 75% of actual costs. Feasibility Grants - capped at \$40,000 with cost-share of at least 20% or \$5000, whichever is less.
Green Affordable Housing Initiative	Affordable housing developments	energy efficiency, solar PV, wind electric	Design assistance - up to \$50,000 Construction assistance - up to \$500,000 Feasibility Grants - up to \$30,000
Community Wind Collaborative	Massachusetts municipalities with winds in excess of 14.5 mph	wind energy	Financial assistance for wind energy feasibility studies - technical assistance, wind monitoring equipment and data analysis
K-12 Initiative	Massachusetts K-12		Annual grants for workshops and materials to help teachers develop renewable energy lessons and activities
Public Awareness Initiative	competitively selected Massachusetts organizations		Periodic grants for trust-sponsored activities, events and campaigns focused on increasing knowledge and support of clean energy

Keyspan Energy offers no-cost energy audits and rebates for insulation, windows, controls, and a gas savings rebate up to 75 cents/therm, in addition to the programs outlined in the table below. For more information refer to www.gasnetworks.com or contact:

Russ Ribeiro
Commercial Field Technician
Honeywell
(508) 238-1194 x333
Russ.ribeiro@honeywell.com

The following programs are available to the town from Keyspan. Programs are subject to change at any time.

Table 5. Keyspan Energy Programs

Solar Rebates	1-781-466-5327
Building Practices and Technology Demonstration Program	1-800-843-3636
Energy Savings Plan	1-800-843-3636
High Efficiency Heating Equipment Rebate Program (see table below for rebates)	1-800-843-3636

Table 6. High Efficiency Heating Equipment Rebate Program

Rebates apply for installations completed between 5/1/06 and 4/30/07. Applications must be received by 5/31/07. All rebates are subject to change without notice

PRODUCT	RATING	REBATE
FURNACES		
Furnaces (up to 150 MBtuh)	90% AFUE* or greater	\$150
CONDENSING UNIT HEATERS		
Condensing Unit heaters (151 to 400 MBtuh)	90% Thermal Efficiency ¹	\$500
DIRECT FIRED HEATERS²		
Direct fired heaters/direct fired makeup air (up to 1500 MBtuh)		\$1000
Direct fired heaters/direct fired makeup air (1501 to 3000 MBtuh)		\$1500
Direct fired heaters/direct fired makeup air (over 3000 MBtuh)		\$2000
INFRARED HEATERS		
Infrared heaters (all sizes)	Low intensity	\$500
STEAM BOILERS		
Steam boilers	82% AFUE* or greater	\$200
HYDRONIC BOILERS		
Hydronic boilers	85% AFUE* or greater	\$500
Hydronic boilers	85% AFUE* or greater	\$700
Hydronic boilers	85% thermal efficiency ¹	\$1000
Hydronic boilers	85% thermal efficiency ¹	\$2000
Hydronic boilers	85% thermal efficiency ¹	\$3000
Hydronic boilers	85% thermal efficiency ¹	\$4000
CONDENSING BOILERS		
Condensing boilers	88% AFUE* or greater	\$600
Condensing boilers	88% AFUE* or greater	\$1000
Condensing boilers	90% thermal efficiency ¹	\$1500
Condensing boilers	90% thermal efficiency ¹	\$3000
Condensing boilers	90% thermal efficiency ¹	\$4500
Condensing boilers	90% thermal efficiency ¹	\$6000
INDIRECT FIRED WATER HEATERS		
Indirect fired water heaters		\$100
Indirect fired water heaters		\$250
ON-DEMAND TANKLESS WATER HEATERS		
With an energy factor of .82 or higher And electronic ignition		\$300

*AFUE = Annual Fuel Utilization Efficiency

¹ Thermal Efficiency = Efficiency of heat transfer in a boiler minus boiler radiation and convection losses

² Modulation of gas and/or variable air flow required

Note: All equipment must meet program guidelines

All rebates are given on a per-unit basis.

All rebates are subject to change without notice

NSTAR should also be consulted for their rebate and energy efficiency programs. Arlington's resource is:

C. Miles
NSTAR
781-441-8037
www.nstaronline.com

Further, a number of Energy Service Companies (ESCOs) offer a wide array of programs to help implement energy savings measures. Some work has already been completed with the help of ESCOs in Arlington town buildings. A valuable resource who could be consulted on ESCOs is the Newton Energy Manager, David Tannozzini. He has saved major funds with the implementation of building management systems, CFLs and other initiatives.

Lastly, The Federal Transportation Equity Act for the 21st Century (TEA-21) allocates and administers funds through the states. Under TEA-21, funds can be spent on pedestrian and bicycle facilities and on public transportation. The most relevant programs are outlined below. For more details see <http://www.fhwa.dot.gov/Tea21/sumenvir.htm>

- The Congestion Mitigation and Air Quality Improvement (CMAQ) program, which funds projects to help meet the requirements of the Clean Air Act, e.g., transit improvements and public fleet conversion to cleaner fuels.
- The Transportation Enhancement Program, which can pay for bicycle, pedestrian and transit facilities and improvements.
- The Bicycle Transportation and Pedestrians Walkways program makes pedestrian walkways, and safety and educational activities eligible for TE funds. Other changes ensure the consideration of bicyclists and pedestrians in the planning process and facility design.

Lobbying

While there is much that the Town and its residents can do to reduce green house emissions, there are policies which are best implemented at the state or federal level. This is especially true in the area of transportation. The town can still have an impact by lobbying for legislation which promotes fuel efficiency and clean energy choices.

The following is a list of policies and projects for which the Town should actively lobby. These issues are discussed in greater depth elsewhere in this report.

- **MBTA's Urban Ring Project:** This project would improve the circumferential connections among the spokes of the T's many radial lines.
- **Sliding scale auto sales taxes based on fuel efficiency:** The state's 5 percent sales tax on motor vehicles could be modified to range from 0 percent to 10 percent based on the fuel efficiency of the vehicle model, with part of the variation within vehicle size classes.
- **Pay-as-you-drive automobile insurance:** Charging for insurance at least in part based miles driven would reduce vehicle miles traveled (VMT).
- **Federal Corporate Average Fuel Economy Standards (CAFE):** There should be a universal fuel economy standard for all vehicles, rather than lower standards for SUVs, vans and pickup trucks.
- **"Green check-off program":** NStar should establish a program where residents can check a box in their utility bill to enroll in a clean energy program offered by the company.
- **LLR:** A federal requirement that replacement tires meet the same low rolling resistance standards as new car tires would reduce fuel usage.